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10/006,681	12/10/2001	Yoshimichi Kudo	16869S-038800US	9306

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TOWNSEND AND TOWNSEND AND CREW, LLP  
TWO EMBARCADERO CENTER  
EIGHTH FLOOR  
SAN FRANCISCO, CA 94111-3834

EXAMINER
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PAN, JOSEPH T

ART UNIT	PAPER NUMBER
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2135

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06/07/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/006,681

Applicant(s)

KUDO ET AL.

Examiner

Joseph Pan

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 24-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 24-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 3/28/07&12/1/01.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Applicant's response file on March 28, 2007 has been carefully considered. Claims 20-23 have been canceled. Claims 24-30 are pending.

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 24-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Traw et al. (U.S. Patent No. 6,542,610 B2), hereinafter "Traw", in view of Ikeda et al. (U.S. Patent No. 6,282,654 B1), hereinafter "Ikeda", and further in view of Itoi (U.S. Pub. No. 2001/0012440 A1).

#### Referring to claim 24:

i. Traw teaches:

A streaming data playback apparatus comprising:

a playback circuit which reproduces streaming data from a recording medium (see figure 6; and column 3, lines 42-46; and column 6, lines 40-46 of Traw);

an interface circuit which performs a scramble process on the streaming data reproduced by the playback circuit and adds copy control information to the scrambled streaming data for transmission (see figure 6, element 606 'Channel Cipher Subsystem'; column 10, lines 11-23; column 3, lines 31-32 'CGMS'; and column 5, lines 27-30 of Traw);

wherein the interface circuit exchanges key information used for the scramble process and a descramble process with a destination apparatus of the streaming data, by performing an authentication process with the destination apparatus (see figure 6, element 604 'Authentication and Key Exchange Subsystem'; and column 11, lines 1-9 of Traw); and

during transmission of the streaming data, the interface circuit refuses to perform an authentication process with any apparatus other than the destination apparatus, and after the transmission of the streaming data, the streaming data on the recording medium is disabled from playback (see figure 6, elements 602, 604; and column 10, line 60, through column 11, line 9 of Traw).

Traw discloses the copy control information (see column 9, lines 66-67 of Traw, "Copy Control Information (such as CGMS bits)"), and changing the copy control information (see column 10, lines 11-14 of Traw, "While content is flowing across an encrypted content channel, the copy control information associated with the stream can be updated at any time via the control channel(s) between the source device and destination device(s)"). However, Traw does not elaborate on how or under what circumstances the copy control information, such as CMGS bits, is changed.

Traw does not specifically mention deleting the streaming data on the recording medium after transmission either.

ii. Ikeda teaches an information signal recording/reproducing system, wherein Ikeda discloses the details of the copy control information CMGS [i.e., Copy Generation Management system], particularly about using CMGS bits to control the copying of the content (see column 1, lines 40-52 of Ikeda, "For example, in the case wherein copying is free, wherein copying is allowable for the first generation, or wherein

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any copying is prohibited, 2-bit copy control information of "00". "10" or "11" is embedded in the information signal, respectively." ).

On the other hand, Itoi teaches a data decoding recording apparatus, wherein Itoi discloses the contents are erased immediately, or whenever necessary (see page 3, paragraph [0038] of Itoi).

iii. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Ikeda into the system of Traw to use the copy control information, such as CMGS bits, to dynamically control the copying of the content: unlimited copies, one generation of copy, no more copy, etc.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Itoi into the system of Traw to delete the streaming data on the recording medium after transmission.

iv. The ordinary skilled person would have been motivated to have applied the teaching of Ikeda into the system of Traw to use the copy control information, such as CMGS bits, to dynamically control the copying of the content: unlimited copies, one generation of copy, no more copy, etc., because CGMS is a well-known format for indicating copy protection status (see column 3, lines 31-32 of Traw).

The ordinary skilled person would have been motivated to have applied the teaching of Itoi into the system of Traw to delete the streaming data on the recording medium after transmission, because the copy control information, such as CGMS, may allow only one generation of the copy [i.e. CMGS bits is '10'].

Referring to claim 25:

i. Traw teaches:

A streaming data playback apparatus comprising:

a playback circuit which reproduces streaming data from a recording medium (see figure 6; and column 3, lines 42-46; and column 6, lines 40-46 of Traw);

an interface circuit which performs a scramble process on the streaming data reproduced by the playback circuit and adds copy control information to the scrambled streaming data for transmission (see figure 6, element 606 'Channel

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Cipher Subsystem'; column 10, lines 11-23; column 3, lines 31-32 'CGMS'; and column 5, lines 27-30 of Traw);

wherein the interface circuit establishes a channel to a destination apparatus of the streaming data for transmission of the streaming data (see figure 2, element 210 'Establish full content channel' of Traw);

wherein the interface circuit exchanges key information used for the scramble process and a descramble process with the destination apparatus by performing an authentication process with the destination apparatus (see figure 6, element 604 'Authentication and Key Exchange Subsystem'; and column 11, lines 1-9 of Traw); and

wherein when transmitting the streaming data, the interface circuit disconnects channels other than the channel used for transmitting the streaming data to the destination apparatus (see figure 2, element 212 'Terminate content transfer on preliminary content channel' of Traw).

Traw discloses the copy control information (see column 9, lines 66-67 of Traw, "Copy Control Information (such as CGMS bits)"), and changing the copy control information (see column 10, lines 11-14 of Traw, "While content is flowing across an encrypted content channel, the copy control information associated with the stream can be updated at any time via the control channel(s) between the source device and destination device(s)."). However, Traw does not elaborate on how or under what circumstances the copy control information, such as CMGS bits, is changed.

Traw does not specifically mention deleting the streaming data on the recording medium after transmission either.

ii. Ikeda teaches an information signal recording/reproducing system, wherein Ikeda discloses the details of the copy control information CMGS [i.e., Copy Generation Management system], particularly about using CMGS bits to control the copying of the content (see column 1, lines 40-52 of Ikeda, "For example, in the case wherein copying is free, wherein copying is allowable for the first generation, or wherein any copying is prohibited, 2-bit copy control information of "00". "10" or "11" is embedded in the information signal, respectively." ).

On the other hand, Itoi teaches a data decoding recording apparatus, wherein Itoi discloses the contents are erased immediately, or whenever necessary (see page 3, paragraph [0038] of Itoi).

iii. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Ikeda into the system of Traw to use the copy control information, such as CMGS bits, to dynamically control the copying of the content: unlimited copies, one generation of copy, no more copy, etc.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Itoi into the system of Traw to delete the streaming data on the recording medium after transmission.

iv. The ordinary skilled person would have been motivated to have applied the teaching of Ikeda into the system of Traw to use the copy control information, such as CMGS bits, to dynamically control the copying of the content: unlimited copies, one generation of copy, no more copy, etc., because CGMS is a well-known format for indicating copy protection status (see column 3, lines 31-32 of Traw).

The ordinary skilled person would have been motivated to have applied the teaching of Itoi into the system of Traw to delete the streaming data on the recording medium after transmission, because the copy control information, such as CGMS, may allow only one generation of the copy [i.e. CMGS bits is '10'].

Referring to claim 26:

Traw, Ikeda, and Itoi teach the claimed subject matter: A stream data playback apparatus (see claim 25 above). Traw further discloses the interface circuit refuses to authenticate any apparatus which tries to share the key information used in the channel (see figure 6, element 604; and column 9, line 59, through column 10, line 2 of Traw).

Referring to claim 27:

i. Traw teaches:

A streaming data playback apparatus comprising:

a playback circuit which reproduces streaming data from a recording medium (see figure 6; and column 3, lines 42-46; and column 6, lines 40-46 of Traw);

an interface circuit which performs a scramble process on the streaming data reproduced by the playback circuit and adds copy control information to the scrambled streaming data for transmission (see figure 6, element 606 'Channel Cipher Subsystem'; column 10, lines 11-23; column 3, lines 31-32 'CGMS'; and column 5, lines 27-30 of Traw);

wherein the interface circuit establishes a first channel to a first destination apparatus of the streaming data for transmitting the streaming data, and a second channel to a second destination apparatus of the streaming data for transmitting the same streaming data (see e.g. figure 8, elements 'Content Channel A', 'Content Channel B' of Traw);

wherein the interface circuit exchanges first key information used for the scramble process and a descramble process with the first destination apparatus by performing an authentication process with the first destination apparatus, and exchanges second key information, different from the first key information, used for the scramble process and the descramble process with the second destination apparatus by performing the authentication process with the second destination apparatus (see figure 6, element 604; and column 9, line 59, through column 10, line 2 of Traw); and

when transmitting the streaming data, the interface circuit adds to the scrambled streaming data on the first channel the copy control information indicating that the transmitted streaming data may be recorded into a recording device, and the interface circuit adds to the scrambled streaming data on the second channel the copy control information indicating that the transmitted streaming data can not be recorded by a recording device, and the streaming data on the recording medium is deleted from playback after the streaming data transmission (see column 10, lines 11-23 of Traw).

Traw discloses the copy control information (see column 9, lines 66-67 of Traw, "Copy Control Information (such as CGMS bits)"), and changing the copy control information (see column 10, lines 11-14 of Traw, "While content is flowing across



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an encrypted content channel, the copy control information associated with the stream can be updated at any time via the control channel(s) between the source device and destination device(s)."). However, Traw does not elaborate on how or under what circumstances the copy control information, such as CMGS bits, is changed.

Traw does not specifically mention deleting the streaming data on the recording medium after transmission either.

ii. Ikeda teaches an information signal recording/reproducing system, wherein Ikeda discloses the details of the copy control information CMGS [i.e., Copy Generation Management system], particularly about using CMGS bits to control the copying of the content (see column 1, lines 40-52 of Ikeda, "For example, in the case wherein copying is free, wherein copying is allowable for the first generation, or wherein any copying is prohibited, 2-bit copy control information of "00". "10" or "11" is embedded in the information signal, respectively." ).

On the other hand, Itoi teaches a data decoding recording apparatus, wherein Itoi discloses the contents are erased immediately, or whenever necessary (see page 3, paragraph [0038] of Itoi).

iii. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Ikeda into the system of Traw to use the copy control information, such as CMGS bits, to dynamically control the copying of the content: unlimited copies, one generation of copy, no more copy, etc.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Itoi into the system of Traw to delete the streaming data on the recording medium after transmission.

iv. The ordinary skilled person would have been motivated to have applied the teaching of Ikeda into the system of Traw to use the copy control information, such as CMGS bits, to dynamically control the copying of the content: unlimited copies, one generation of copy, no more copy, etc., because CGMS is a well-known format for indicating copy protection status (see column 3, lines 31-32 of Traw).

The ordinary skilled person would have been motivated to have applied the teaching of Itoi into the system of Traw to delete the streaming data on the

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recording medium after transmission, because the copy control information, such as CGMS, may allow only one generation of the copy [i.e. CMGS bits is '10'].

Referring to claim 28:

Traw, Ikeda, and Itoi teach the claimed subject matter: A stream data playback apparatus (see claim 27 above). Traw further discloses the display device (see column 3, line 9 of Traw).

Referring to claim 29:

i. Traw teaches:

A streaming data playback apparatus comprising:

a playback circuit which reproduces streaming data from a recording medium (see figure 6; and column 3, lines 42-46; and column 6, lines 40-46 of Traw);

an interface circuit which performs a scramble process on the streaming data reproduced by the playback circuit and adds copy control information to the scrambled streaming data for transmitting the scrambled streaming data and the copy control information to a recording device (see figure 6, element 606 'Channel Cipher Subsystem'; column 10, lines 11-23; column 3, lines 31-32 'CGMS'; and column 5, lines 27-30 of Traw);

wherein when transmitting the streaming data, the interface circuit changes the copy control information added to the scrambled streaming data depending on a first case that the streaming data is to remain stored on the recording medium after the streaming data transmission and a second case that the streaming data on the recording medium is to be deleted from the streaming data transmission (see column 10, lines 11-23 of Traw).

Traw further discloses the detection and the interruption of the transmission of the stream data (see column 4, lines 62-65 of Traw).

Traw discloses the copy control information (see column 9, lines 66-67 of Traw, "Copy Control Information (such as CGMS bits)"), and changing the copy control information (see column 10, lines 11-14 of Traw, "While content is flowing across an encrypted content channel, the copy control information associated with the stream

can be updated at any time via the control channel(s) between the source device and destination device(s)."). However, Traw does not elaborate on how or under what circumstances the copy control information, such as CMGS bits, is changed.

Traw does not specifically mention deleting the streaming data on the recording medium after transmission either.

ii. Ikeda teaches an information signal recording/reproducing system, wherein Ikeda discloses the details of the copy control information CMGS [i.e., Copy Generation Management system], particularly about using CMGS bits to control the copying of the content (see column 1, lines 40-52 of Ikeda, "For example, in the case wherein copying is free, wherein copying is allowable for the first generation, or wherein any copying is prohibited, 2-bit copy control information of "00". "10" or "11" is embedded in the information signal, respectively." ).

On the other hand, Itoi teaches a data decoding recording apparatus, wherein Itoi discloses the contents are erased immediately, or whenever necessary (see page 3, paragraph [0038] of Itoi).

iii. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Ikeda into the system of Traw to use the copy control information, such as CMGS bits, to dynamically control the copying of the content: unlimited copies, one generation of copy, no more copy, etc.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Itoi into the system of Traw to delete the streaming data on the recording medium after transmission.

iv. The ordinary skilled person would have been motivated to have applied the teaching of Ikeda into the system of Traw to use the copy control information, such as CMGS bits, to dynamically control the copying of the content: unlimited copies, one generation of copy, no more copy, etc., because CGMS is a well-known format for indicating copy protection status (see column 3, lines 31-32 of Traw).

The ordinary skilled person would have been motivated to have applied the teaching of Itoi into the system of Traw to delete the streaming data on the

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recording medium after transmission, because the copy control information, such as CGMS, may allow only one generation of the copy [i.e. CMGS bits is '10'].

Referring to claim 30:

Traw, Ikeda, and Itoi teach the claimed subject matter: A stream data playback apparatus (see claim 29 above). Traw further discloses the copy control information (see column 3, lines 31-32; column 5, lines 27-30; and column 10, lines 11-23 of Traw).

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(a) Yokota et al. (U.S. Patent No.: 6,788,604 B2) disclose a recording apparatus for facilitating data erasure operations involving data recorded on a recording medium.

(b) Okuyama et al. (U.S. Patent No.: 6,256,390 B1) disclose a copy flag detecting circuit in a device detects the copy generation management information.

(c) Tagawa et al. (U.S. Patent No.: 6,834,348 B1) disclose a data transmit/receive unit receives encrypted digital data distributed through an electronic music distribution system.

(d) Komuro et al. (U.S. Patent No.: 6,622,249 B1) disclose a data recording apparatus.

(e) Ogino et al. (U.S. Patent No.: 6,571,220 B1) disclose a copy generation management method.

***Response to Arguments***

5. Applicant's arguments filed on March 28, 2007 have been fully considered but they are not persuasive.

Applicant argues:

"Claim 24 refers to a third party in addition to a sender and a receiver." (see page 1, 5<sup>th</sup> paragraph, Applicant's Arguments/Remarks)

Examiner maintains:

Traw discloses "In embodiments of the present invention, when two or (more) compliant devices are to exchange protected content across a communications medium, such as an IEEE 1394 serial bus, the cryptographic protocols described herein are used to protect the content as it traverses the bus." (see figure 8, element 'PC', element 806 [i.e., device A, device B, device C]; and column 4, lines 34-48 of Traw, emphasis added).

Therefore, Traw discloses a third party in addition to a sender and a receiver.

Applicant argues:

"The Office Action states that step 212 in Fig. 2 of Traw discloses this feature of Applicants' invention. Traw states that "the content transfer over the preliminary content channel is terminated and content transfer over the full content channel is begun." (Column 5, lines 44-46). In other words, plural channels are used between one sender and one receiver, and the channel for transfer is switched during the content transfer. (see page 2, 3<sup>rd</sup> paragraph, Applicant's Arguments/Remarks, emphasis added).

Examiner maintains:

Traw discloses "FIG. 1(b) illustrates an alternative embodiment which includes a step 102, wherein a determination is made as to whether the content source or sink is computationally constrained. If neither of the devices is computationally constrained then the step of establishing preliminary control and content channels is bypassed." (see figure 1(b); figure 5, element 504 'transmit content via content channel'; and column 4, lines 28-33 of Traw, emphasis added).

Therefore, Traw discloses using the content channel to transfer the content during the content transfer.

Applicant argues:

"The exchanged key is unique to each destination device." (see page 3, 3<sup>rd</sup> paragraph, Applicant's Arguments/Remarks).

Examiner maintains:

Traw discloses "Both Device A and Device B generate the preliminary control channel key by encrypting the random challenge of Device A and the random challenge of Device B, using the Baseline Cipher and the secret shared key S.sub.U, then performing an exclusive OR operation between the two encrypted random challenges 315, 316. This can be described symbolically as  $K_{pre\_control} = E[S.sub.U, A.sub.c] .sym. E[S.sub.U, B.sub.c]$ ." (see figure 3(a); and column 7, lines 42-48 of Traw)

Therefore, Traw disclose generating the exchanged key unique to each destination device.

Applicant argues:

"when transmitting the streaming data from the recording medium to the at least first and second destination apparatus, the interface circuit adds to the scrambled streaming data on the first channel the copy control information indicating that the transmitted streaming data may be recorded into a recording device, and the interface circuit changes the copy control information, adds to the scrambled streaming data on the second channel the copy control information indicating that the transmitted streaming data can not be recorded by a recording device, and deletes the streaming data on the recording medium after the streaming data transmission." (see page 3, last paragraph, Applicant's Arguments/Remarks, emphasis added).

Examiner maintains:

Traw discloses the copy control information (see column 9, lines 66-67 of Traw, "Copy Control Information (such as CGMS bits)"), and changing the copy control information (see column 10, lines 11-14 of Traw, "While content is flowing across an

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encrypted content channel, the copy control information associated with the stream can be updated at any time via the control channel(s) between the source device and destination device(s).”).

Therefore, Traw discloses changing the copy control information when transmitting the streaming data from the recording medium to the at least first and second destination apparatus.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office Action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Pan whose telephone number is 571-272-5987.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached at 571-272-3859. The fax and phone

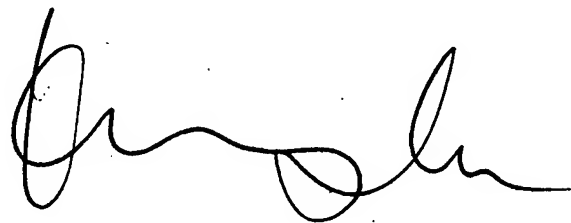
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numbers for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

Joseph Pan

May 29, 2007

A handwritten signature in black ink, appearing to read 'Kim Vu', with a stylized, cursive script.

KIM VU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100